



SPYWOLF

Security Audit Report



Completed on
December 9, 2023

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OVERVIEW

This audit has been prepared for **MemeETF** to review the main aspects of the project to help investors make an informative decision during their research process.

You will find a summarized review of the following key points:

- ✓ Contract's source code
- ✓ Owners' wallets
- ✓ Tokenomics
- ✓ Team transparency and goals
- ✓ Website's age, code, security and UX
- ✓ Whitepaper and roadmap
- ✓ Social media & online presence

“

The results of this audit are purely based on the team's evaluation and does not guarantee nor reflect the projects outcome and goal

”

- SPYWOLF Team -





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MemeETF (Staking)



PROJECT DESCRIPTION

According to their website/whitepaper:

"\$MemeETF, the world's first memecoin ETF, to spank the blockchain & pays dividends. Come vibe with the asset managers.

The world's first meme coin, backed by meme coins and memes

Join our journey of revolutionising crypto ETF by memes! Stake

\$MemeETF and enjoy passive income through our staking pool."

Release Date: Launched in November, 2023

Category: Meme coin



CONTRACT INFO

Token Name
N/A

Symbol
N/A

Contract Address

0x7c6F61d56300d822fB96aB896aE545F6cEcBEE76

Network

Binance Smart Chain
TESTNET

Language

Solidity

Deployment Date

Dec 08, 2023

Contract Type

Staking

Total Supply

N/A

Status

Not launched

TAXES

Buy Tax
none

Sell Tax
none

*Taxes can be changed in future



Our Contract Review Process

The contract review process pays special attention to the following:

- ✓ Testing the smart contracts against both common and uncommon vulnerabilities
- ✓ Assessing the codebase to ensure compliance with current best practices and industry standards.
- ✓ Ensuring contract logic meets the specifications and intentions of the client.
- ✓ Cross referencing contract structure and implementation against similar smart contracts produced by industry leaders.
- ✓ Thorough line-by-line manual review of the entire codebase by industry experts.

Blockchain security tools used:

- OpenZeppelin
- Mythril
- Solidity Compiler
- Hardhat



TOKEN TRANSFERS STATS

Transfer Count	N/A
Uniq Senders	N/A
Uniq Receivers	N/A
Total Amount	N/A
Median Transfer Amount	N/A
Average Transfer Amount	N/A
First transfer date	N/A
Last transfer date	N/A
Days token transferred	N/A

SMART CONTRACT STATS

Calls Count	TESTNET
External calls	TESTNET
Internal calls	TESTNET
Transactions count	TESTNET
Uniq Callers	TESTNET
Days contract called	TESTNET
Last transaction time	TESTNET
Created	TESTNET
Create TX	TESTNET
Creator	TESTNET



VULNERABILITY CHECK

Design Logic	Passed
Compiler warnings.	Passed
Private user data leaks	Passed
Timestamp dependence	Passed
Integer overflow and underflow	Passed
Race conditions and reentrancy. Cross-function race conditions	Passed
Possible delays in data delivery	Passed
Oracle calls	Passed
Front running	Passed
DoS with Revert	Passed
DoS with block gas limit	Passed
Methods execution permissions	Passed
Economy model	Passed
Impact of the exchange rate on the logic	Passed
Malicious Event log	Passed
Scoping and declarations	Passed
Uninitialized storage pointers	Passed
Arithmetic accuracy	Passed
Cross-function race conditions	Passed
Safe Zeppelin module	Passed
Fallback function security	Passed



THREAT LEVELS

When performing smart contract audits, our specialists look for known vulnerabilities as well as logical and access control issues within the code. The exploitation of these issues by malicious actors may cause serious financial damage to projects that failed to get an audit in time. We categorize these vulnerabilities by the following levels:

High Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Medium Risk

Issues on this level are critical to the smart contract's performance/functionality and should be fixed before moving to a live environment.

Low Risk

Issues on this level are minor details and warning that can remain unfixed.

Informational

Information level is to offer suggestions for improvement of efficacy or security for features with a risk free factor.



FOUND THREATS

High Risk

No high risk-level threats found in this contract.

Medium Risk

No medium risk-level threats found in this contract.

Low Risk

No low risk-level threats found in this contract.



Informational

Owner can send tokens from the contract to any address.
Owner can withdraw only tokens that are not included in total staked and total closed dividends.

```
function openBalance() public view returns (uint256) {
    uint256 bal = token.balanceOf(address(this));
    return (bal - (totalStaked + totalClosedDividends));
}

function sweep(
    address to,
    uint256 amount
) external amountZeroCheck(amount) onlyOwner {
    if (amount > openBalance()) revert INSUFFICIENT_FUND();
    if (to == address(0)) revert ZERO_ADDRESS();
    token.safeTransfer(to, amount);
    emit Sweep(to, amount);
}
```

Some users might not be able to withdraw their full staked amount (if they decide to), as the contract relies on new tokens in the contract to pay dividends to staking users. If user's staked balances are greater than the contract's current balances, user can unstake amount up to the current contract's balances.

```
function unstake(uint256 amount) external amountZeroCheck(amount) {
    StakeInfo memory memoryData = details[msg.sender];

    if (memoryData.stakedBalance < amount) revert ZERO_BALANCE();

    _updateDividends(memoryData);
    unchecked {
        details[msg.sender].stakedBalance -= amount;
        totalStaked -= amount;
    }

    emit Unstaked(msg.sender, amount);
    token.safeTransfer(msg.sender, amount);
}
```



Informational

Owner can set staking ROI (return of investment) rate from 0.01% to 100% per day.

Reward rate for current user' stake changes only for next iteration. For example user stakes at rate 1, if administrator changes the stake rate from 1 to 2, user's dividends will increase with the respectable multiplier for their given staking time - up to the updating point in time. When administrator changes the rates again, user will not receive any further dividends. In order for user to 'sync' with the new staking rate he/she must claim dividends.

```
function setRate(uint256 rate) external onlyOwner {
    _setRate(rate);
}

function _setRate(uint256 _rewardPerDay) private {
    if (_rewardPerDay < 0 || _rewardPerDay > 1e4) revert LIMIT_ERROR();

    uint256 round = nextRoundId;
    unchecked {
        nextRoundId++;
    }
    rates[round] = RateInfo(_rewardPerDay, block.timestamp);
    emit NewRate(round, _rewardPerDay, block.timestamp);
}
```



RECOMMENDATIONS FOR

GOOD PRACTICES

1

Consider fundamental tradeoffs

2

Be attentive to blockchain properties

3

Ensure careful rollouts

4

Keep contracts simple

5

Stay up to date and track development

MemeETF Staking

GOOD PRACTICES FOUND

- ✓ The owner cannot pause the contract



This is staking **ROI** contract with **APY** which rate is set and can be changed by contract's owner.

User's dividends will be updated once every 24 hours at the current rate.

ROI contracts/dapps are considered as high risk investments and may lead to capital loss.

**ROI - Return of investment*

**APY - Annual percentage yield*

TOKENOMICS



SPYWOLF

CRYPTO SECURITY

Audits | KYCs | dApps
Contract Development

ABOUT US

We are a growing crypto security agency offering audits, KYCs and consulting services for some of the top names in the crypto industry.

- ✓ OVER 700 SUCCESSFUL CLIENTS
- ✓ MORE THAN 1000 SCAMS EXPOSED
- ✓ MILLIONS SAVED IN POTENTIAL FRAUD
- ✓ PARTNERSHIPS WITH TOP LAUNCHPADS, INFLUENCERS AND CRYPTO PROJECTS
- ✓ CONSTANTLY BUILDING TOOLS TO HELP INVESTORS DO BETTER RESEARCH

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Disclaimer

This report shows findings based on our limited project analysis, following good industry practice from the date of this report, in relation to cybersecurity vulnerabilities and issues in the framework and algorithms based on smart contracts, overall social media and website presence and team transparency details of which are set out in this report. In order to get a full view of our analysis, it is crucial for you to read the full report.

While we have done our best in conducting our analysis and producing this report, it is important to note that you should not rely on this report and cannot claim against us on the basis of what it says or doesn't say, or how we produced it, and it is important for you to conduct your own independent investigations before making any decisions. We go into more detail on this in the disclaimer below – please make sure to read it in full.

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No applications were reviewed for security. No product code has been reviewed.